



**RWANDA  
STANDARD**

**DRS  
446**

First edition

2020-mm-dd

---

---

**Low fat dairy ice cream and dairy ices —  
Specification**

ICS 67.100.40

---

---

Reference number

DRS 446: 2020

© RSB 2020

In order to match with technological development and to keep continuous progress in industries, standards are subject to periodic review. Users shall ascertain that they are in possession of the latest edition

© RSB 2020

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without prior written permission from RSB.

Requests for permission to reproduce this document should be addressed to:

Rwanda Standards Board

P.O Box 7099 Kigali-Rwanda

KK 15 Rd, 49

Tel. +250 788303492

Toll Free: 3250

E-mail: [info@rsb.gov.rw](mailto:info@rsb.gov.rw)

Website: [www.rsb.gov.rw](http://www.rsb.gov.rw)

ePortal: [www.portal.rsb.gov.rw](http://www.portal.rsb.gov.rw)

<b>Contents</b>	<b>Page</b>
Foreword .....	iv
1 Scope .....	1
2 Normative references .....	1
3 Terms and definitions .....	2
4 Ingredients .....	3
4.1 Essential ingredients .....	3
4.2 Optional ingredients .....	3
5 Requirements .....	4
5.1 General requirements .....	4
5.2 Specific requirements .....	4
6 Food additives .....	4
7 Hygiene .....	5
8 Contaminants .....	5
8.1 Heavy metals .....	5
8.2 Pesticide and veterinary drug residues .....	5
8.3 Aflatoxin M1 .....	5
9 Packaging .....	5
10 Labelling .....	5
11 Sampling .....	6

PUBLIC REVIEW

## **Foreword**

Rwanda Standards are prepared by Technical Committees and approved by Rwanda Standards Board (RSB) Board of Directors in accordance with the procedures of RSB, in compliance with Annex 3 of the WTO/TBT agreement on the preparation, adoption and application of standards.

The main task of technical committees is to prepare national standards. Final Draft Rwanda Standards adopted by Technical committees are ratified by members of RSB Board of Directors for publication and gazettment as Rwanda Standards.

DRS 446 was prepared by Technical Committee RSB/TC 4, *Milk and milk products*.

In the preparation of this standard, reference was made to the following standard:

1. RS EAS 70: 2019 Dairy ice cream — Specification

The assistance derived from the above source is hereby acknowledged with thanks.

### **Committee membership**

The following organizations were represented on the Technical Committee on *Milk and milk products*. (RSB/TC 004) in the preparation of this standard.

Blessed Dairies Ltd

National Industrial Research and Development Agency (NIRDA)

Nyarutarama Business Incubation Center (NBIC)

RICA

Rwanda National Dairy Platform (RNDP)

University of Rwanda, College of Agriculture, Animal Science and Veterinary Medicine (UR-CAVM)

World Food Programme (WFP)

Rwanda Standards Board (RSB) – Secretariat

# Low fat dairy ice cream and dairy ices — Specification

## 1 Scope

This Draft Rwanda Standard specifies the requirements, sampling and test methods for low fat dairy ice cream and dairy ices. This standard does not apply to the product covered I RS EAS 70.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

AOAC 999.10, *Lead, Cadmium, Zinc, Copper, and Iron in Foods Atomic Absorption Spectrophotometry after Microwave Digestion*

ISO 18068; *Cotton fibres — Test method for sugar content – Spectrophotometry*

ISO 7932, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of presumptive Bacillus cereus — Colony-count technique at 30 degrees C*

RS CAC/RCP 1, *Code of practice — General principle for food hygiene*

RS CAC/RCP 57, *Code of hygienic practice for milk and milk products*

RS CODEX STAN 192, *General standard for food additives*

RS CODEX STAN 212, *Sugars — Specification*

RS EAS 12, *Potable water — Specification*

RS EAS 12, *Potable water—Specification*

RS EAS 22, *Butter—Specification*

RS EAS 49, *Milk powders and cream powder — Specification*

RS EAS 67, *Raw cow milk—Specification*

RS EAS 69, *Pasteurized milk—Specification*

RS ISO 11290-2, *Microbiology of food and animal feeding stuffs — Horizontal method for the detection and enumeration of listeria monocytogenes — Part 2: Enumeration method*

RS ISO 11866-1, *Milk and milk products— Enumeration of presumptive Escherichia coli — Part 1: Most probable number technique using 4 — Methylumbelliferyl —  $\beta$  — D — glucuronide(MUG)*

RS ISO 14501, *Milk and milk powder — Determination of aflatoxin M1 content — Clean-up by immunoaffinitychromatography and determination by high-performance liquid chromatography*

RS ISO 3728, *Ice-cream and milk ice — Determination of total solid content*

RS ISO 4832, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of microorganisms — Colony Count Technique*

RS ISO 4833-1, *Microbiology of the food chain — Horizontal method for the enumeration of microorganisms— Part 1: Colony count at 30 degrees C by the pour plate technique*

RS ISO 4833-2, *Microbiology of the food chain — Horizontal method for the enumeration of microorganisms — Part 2: Colony count at 30 degrees C by the surface plating technique.*

RS ISO 5538, *Milk and milk products — Sampling — Inspection by attributes*

RS ISO 5538, *Milk and milk products — Sampling — Inspection by attributes*

RS ISO 6579-1, *Microbiology of the food chain — Horizontal method for the detection, enumeration and serotyping of Salmonella — Part 1: Detection of Salmonella spp*

RS ISO 6611, *Milk and milk products — Methods of microbiological examination — Part 3: Enumeration of colony — forming units of yeasts and/or moulds — colony — count technique at 25° C*

RS ISO 6888, *(all parts) Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species)*

RS ISO 6888-1, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species) — Part 1: Technique using Baird-Parker agar medium*

RS ISO 8197, *Milk and milk products — Sampling — Inspection by variables*

### **3 Terms and definitions**

For the purposes of this standard, the following terms and definitions apply.

#### **3.1**

##### **dairy**

refers to or is suggestive, directly or indirectly, of milk or milk products

### 3.2

#### **dairy ice**

frozen food product made from pasteurized milk ice mix by freezing followed by the optional addition of chocolate, fruits, nuts, or confections

### 3.3

#### **low fat dairy ice cream**

frozen food product made from pasteurized skimmed dairy milk mix by a process of freezing with incorporation of air, followed by the optional addition of chocolate, fruits, nuts or confections

### 3.4

#### **raw cow milk**

normal, clean and fresh secretions extracted from the udder of a cow, but excluding that got during the first seven (7) days after calving

### 3.5

#### **food grade packaging material**

packaging material, made of substances which are safe and suitable for the intended use and which will not impart any toxic substance or undesirable odour or flavour to the product.

## **4 Ingredients**

### **4.1 Essential ingredients**

The following essential ingredients shall be used and shall comply with the relevant Standards:

- a) Milk complying with RS EAS 67, RS EAS 69 or RS EAS 49;
- b) sugars complying with RS CODEX STAN 212 or other specific standards;
- c) butter complying with RS EAS 22 and
- d) potable water complying with RS EAS 12.

### **4.2 Optional ingredients**

Other ingredients that may be added to low fat dairy ice cream and dairy ices shall comply with relevant standards. They include but are not limited to:

- a) egg or egg products;

- b) fruit and fruit products;
- c) chocolate or cocoa;
- d) coffee;
- e) nuts; and
- f) honey.

## 5 Requirements

### 5.1 General requirements

Low fat dairy ice cream and dairy ices shall:

- a) be homogeneous mixture free from organoleptically detectable ice crystals.
- b) The flavour shall be typical of the ingredients used without any foreign taste or odour, or any indication of deterioration.
- c) The texture shall be free of grittiness
- d) contain no fat other than milk fat as it may be introduced by the use of egg, flavouring substances, emulsifying agents or stabilizing agents.

### 5.2 Specific requirements

Low fat dairy ice cream and dairy ices shall comply with specific requirements given in Table 1 when tested in accordance with test methods specified therein.

**Table 1 — Specific requirements for low fat dairy ice cream and dairy ices**

S/N	Characteristic	Product		Test method
		Low fat dairy ice cream	Dairy ices	
i.	Total sugar (excluding Lactose), %, m/m, min.	13.0	13.0	ISO 18068
ii.	Milk solids Non-fat, % m/m, min.	11.0	8.0	RS ISO 3728
iii.	Milk fat, %, m/m, min.	0.51-2.70	3.0 min	
iv.	Overrun % max	100	100	

## 6 Food additives

Food additives which may be added to low fat dairy ice and dairy ices shall be in accordance with RS CODEX STAN 192.



## 7 Hygiene

**7.1** Low fat dairy ice cream and dairy ices shall be produced and handled in accordance with RS CAC/RCP 57 and RS CAC/RCP 1

**7.2** Low fat dairy ice cream and dairy ices shall comply with the microbiological limits given in Table 2 when tested in accordance with the test methods specified therein.

**Table 2 — Microbiological limits in low fat dairy ice and dairy ices**

S/N	Micro-organisms	Maximum limits	Test method
i.	Total plate count, CFU/g	4X10 <sup>4</sup>	RS ISO 4833-1
ii.	<i>Non-faecal coliforms</i> , CFU/g	10	RS ISO 4832
iii.	<i>E. Coli</i> , CFU/g	Absent	RS ISO 11866-1
iv.	<i>Salmonella spp</i> , CFU/ 25g	Absent	RS ISO 6579-1
v.	<i>L. monocytogenes</i> , CFU/g	Absent	RS ISO 11290-2
vi.	<i>Staphylococcus aureus</i> , CFU/g	Absent	RS ISO 6888-1
vii.	<i>Bacillus cereus</i> , CFU/g	Absent	ISO 7932
viii.	Yeasts and moulds, CFU/g	10	RS ISO 6611

## 8 Contaminants

### 8.1 Heavy metals

When tested in accordance with AOAC 999.10, the level of Lead (Pb) shall not exceed 0.02 mg/kg.

### 8.2 Pesticide and veterinary drug residues

Low dairy ice cream and dairy ices shall comply with the maximum residue limits established by the Codex Alimentarius Commission, in CAC/MRL 2 for milk and milk products.

### 8.3 Aflatoxin M1

Low dairy ice cream and dairy ices shall not contain more than 0.5 µg/kg when tested in accordance with RS ISO 14501.

## 9 Packaging

Low dairy ice cream and dairy ices shall be packaged in clean and safe food grade containers in order to protect it from contamination and deterioration.

## 10 Labelling

**11.1** In addition to requirements of RS EAS 38, the following specific provisions shall apply:

- a) the name of the product; "Low fat dairy icecream" and "Dairy ices";
- b) In case of products containing fruits, "name of the fruit" followed by the name of the product. The words "name of fruit or flavoured" may be added to dairy ice and dairy ice cream, (for example — "strawberry flavoured low fat dairy ice cream");

NOTE Trade names may be used in labelling provided the designations in accordance with the principles of the above requirements are clear and prominent;

- c) a complete list of ingredients on the label in descending order of proportion;
- d) the net contents by mass or volume in the SI units;
- e) fat content;
- f) the name, physical location and address of the manufacturer or, packer, distributor, importer, exporter vendor;
- g) the country of origin;
- h) indication of the date of production, that is, the date the final product was packaged for final sale;
- i) the date of expiry; and
- j) storage instructions.

**11.2** For ice products sold non-packaged, labelling shall be done by means of a notice displayed at the place of sale.

## **11 Sampling**

Sampling shall be done in accordance with RS ISO 5538.

PUBLIC REVIEW

---

---

Price based on 6 pages